

508,737

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



Rec'd PCT/PTO 16 DEC 2004



(43) International Publication Date  
31 December 2003 (31.12.2003)

PCT

(10) International Publication Number  
**WO 2004/000717 A2**

- (51) International Patent Classification<sup>7</sup>: **B81B**
- (21) International Application Number:  
PCT/GB2003/002495
- (22) International Filing Date: 9 June 2003 (09.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0214206.5 19 June 2002 (19.06.2002) GB
- (71) Applicant (for all designated States except US): **FIL-TRONIC COMPOUND SEMICONDUCTORS LIMITED** [GB/GB]; The Waterfront, Salts Mill Road, Saltaire, Shipley, West Yorkshire BD18 3TT (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **GALLANT, Andrew, James** [GB/GB]; c/o David Wood, School of Engineering, University of Durham, South Road, Durham DH1 3LE (GB).
- (74) Agent: **ALLMAN, Peter, John**; Marks & Clerk, Sussex House, 83-85 Mosley Street, Manchester M2 3LG (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A MICRO-ELECTROMECHANICAL VARIABLE CAPACITOR

(57) Abstract: A micro-electromechanical variable capacitor with first and second capacitor plates spaced apart to define a gap therebetween. The first plate has two control electrodes and an active electrode. The second plate is movable relative to first plate when a voltage is applied to produce a potential difference across the control electrode and the second capacitor plate. This has the effect of varying the capacitance of the capacitor. The facing surface of at least one of the plates is formed in such a way that it has a roughened surface. The degree of roughness is sufficient to prevent the facing surfaces adhering together through stiction.



WO 2004/000717 A2